Team effectiveness and team development in CSCL

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There is a wealth of research on computer-supported cooperative work (CSCW) that is neglected in computer-supported collaborative learning (CSCL) research. CSCW research is concerned with contextual factors, however, that may strongly influence collaborative learning processes as well, such as task characteristics, team formation, team members' abilities and characteristics, and role assignment within a team. Building on a critical analysis of the degree to which research on CSCW translates to CSCL, this article discusses the mediating variables of teamwork processes and the dynamics of learning-teams. Based on work-team effectiveness models, it presents a framework with key variables mediating learning-team effectiveness in either face-to-face or online settings within the perspective of learning-team development.

The social-constructivist paradigm holds that collaborative learners should be involved in processes of knowledge construction to achieve deep learning and conceptual change through discussion and argumentation (Bereiter, 2002; Bruffee, 1993; Salomon & Globerson, 1989). *Learning-teams* are effective to the extent that learners intend to and actually manage to achieve these learning goals. Their goal is to learn while working on a problem, project, task, and so forth. *Work-teams*, on the other hand, are effective when they successfully use their distributed expertise to effectively and efficiently perform as a team to successfully complete a given task. In work-teams, learning may occur as a by-product of this collaboration, but it is not the primary goal, though many employers see this as an added value of working in teams (Kayes, Kayes, & Kolb, 2005; Sessa & London, 2007).

Because learning (i.e., knowledge construction) is the primary goal of learning-teams in educational settings, even if the assigned task is to complete a product, team effectiveness is primarily defined in terms of the quality of team learning and individual learning, whereas team effectiveness in work-teams is primarily about product quality. This implies that variables mediating learning-team effectiveness can, and maybe even should differ from variables mediating work-team effectiveness, or variables mediating effectiveness in both contexts may differ in their impact. This article first critically analyzes research on work-team effectiveness in organizational settings to establish to what extent the wealth of work-team research may inform research on learning-team effectiveness and then presents a conceptual framework on learning-team effectiveness for research on collaborative learning.

The differences between work-team effectiveness and learning-team effectiveness are mirrored by differences in the focus of research on team effectiveness in both contexts. Research on *work-teams* in organizational settings considers multiple aspects of work-team effectiveness such as speed,

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